

# LACCD IT ORGANIZATION, STAFF AND PROCESS EVALUATION

Executive Project Summary

May 2018



# Table of Contents

1. Project Overview
2. Current State Findings Summary
3. Key Challenges – Details
4. Recommendations Overview



# PROJECT OVERVIEW

# Project Overview

## Organization, Staff and Process Evaluation

- ✓ Common understanding of the LACCD current state environment and comparison to best practices and alignment
- ✓ Identification of key District organizational drivers, guiding principles, and business strategies
- ✓ Identification of high impact opportunities to improve organization, staffing, and skill-sets to enhance security of systems, improve operations, foster collaboration, effectively structure and utilize distributed and centralized resources across the District
- ✓ Identification of opportunities to improve existing processes, workflows, and operational documentation to align with best practices and industry standards, reduce operational risks, and enable better service delivery across the District
- ✓ A series of recommendations for Cyber Security and Business Continuity, including offsite storage, backup processes, data center management, and standards for technical security management (e.g. firewalls, server upgrades)
- ✓ Considerations for how IT Operations can better serve students, faculty, employees, and the evolving needs of the customer base
- ✓ A high-level implementation roadmap that is prioritized and sequenced to support LACCD strategic planning efforts
- ✓ A district-wide matrix comparing and contrasting the 10 locations against an established baseline

2



# CURRENT STATE FINDINGS SUMMARY

# Key Strengths

LACCD's IT organization has several notable strengths that can be built upon to drive lasting change.

- The District has **many talented, dedicated, and hard-working staff** who remain loyal to the District, and want to ensure success by working weekends, overtime, and even during vacations, to deliver and support IT services.
- IT staff from across the District expressed a **strong desire to take on new responsibilities** and skillsets that can support the growing IT needs of LACCD.
- Numerous IT staff from across the District have expressed a **strong desire for formal, well-documented, and standardized processes** across the portfolio of IT services.
- IT staff at various colleges have **invested in developing their skills individually** and maintain those skills for the betterment of the District.
- District **bond measures have provided necessary funding** for enhancing and modernizing the enterprise infrastructure including the development of new buildings with the latest technology as well as enabling past due network upgrades and hardware refreshes.
- In various parts of the organization, **pockets of best practices exist** that can be socialized and operationalized across the District to improve the operational maturity of the IT organization.
- The District and individual colleges have invested in bringing in **fresh, top talent** to fill vacancies in the organization while at the same time bringing a **modern approach** to the delivery of services. The large number of vacancies across the District are further opportunity to infuse the District with more industry leading practices through hiring of more experienced, forward-thinking technologists.

# Key District-wide Challenges

IT across the district faces structural challenges in critical areas that impact its ability to play a strategic enabling role in the future direction of LACCD.

- The District as a whole **lacks an effective and transparent funding model** for IT and does not take into account equipment refresh or the ongoing cost of operations.
- There is **not a clear, cohesive strategy and unified vision** for information technology across the entire district.
- Stakeholders have indicated that **governance model is not effective** and does not allow them to engage / participate in enterprise-wide technology initiatives in a meaningful way.
- District IT **lacks a formalized help desk** function to manage intake of end user requests and perform basic first-call triage techniques.
- **No formal information security management program** was identified across any of the campuses and IT security roles and responsibilities are not defined within the IT organization.
- LACCD continues to invest in redundant infrastructure and **has limited Business Continuity (BC) or Disaster Recovery (DR) plans** to respond to a disruptive event.
- LACCD utilizes a **mix of off-the-shelf and custom applications** across the district **with little oversight**.
- LACCD's IT organizations appear significantly **understaffed** relative to demand and have little opportunity for professional development and advancement.
- IT **lacks a structured approach** to understanding the **fully burdened costs** of service and Total cost of Ownership (TCO).

**LACCD's decentralized model has a profound impact in terms of the incentives to maintain a cohesive and collaborative IT strategy.**

# Key College-level Challenges

While each college struggles with unique challenges based on the circumstances and specific environment at each campus, a number of observations were consistent across the District.

- Broader **IT strategic planning efforts** do not occur collaboratively across the District, forcing individual colleges to develop technology plans independently of the District office.
- Although an attempt at cross-District collaboration and **governance** exists through the District Technology Committee (DTC), participants indicated that **attempts to standardize are often thwarted** by the objection of a single campus. Further, enforcement of standards is limited due to the decentralized nature of the District.
- A desire for colleges to **avail themselves of District IT services is limited** due to the reluctance to rely on District IT because of staff shortages, past failures, and lack of communication/collaboration.
- The colleges across the District all maintain a diverse application portfolio to meet the needs of both the academic and administrative units, resulting in a **duplication of many solutions** District-wide.
- Each institution experiences unique issues that **inhibit the ability to attract and retain talent**. In addition, a **lack of upward mobility** within the distributed IT structure forces IT staff to look outside their institutions for advancement opportunities, often times leading to “**staff cannibalization.**”
- Restrictions to IT staff duties **prohibit staff from gaining additional expertise** that allows them to qualify for higher level roles since doing so will result in working out of class.
- The current budgeting and **funding model** for IT operations at the college level is **inadequate** for maintaining ongoing operations and discourages standardization and adoption of best practices.
- It was noted across numerous campus that IT staff **do not have proper lines of communication** to Educational Services Center (ESC) IT and are often left guessing or forced to rely on personal relationships in order to manage or support enterprise systems.



3



## KEY CHALLENGES – DETAILS

# IT Operations – Information Security

*LACCD has **not moved forward** with a broader **formalized security management program** for managing IT risks on a continuous basis at the district and campuses. Given the security events of 2016/17, we would have anticipated the organization being further down the path of maturity.*

## Observations:

- Dedicated **Security FTEs do not exist** and **responsibilities** are **not clearly defined** or **assigned** across the IT Organization or the Institutions.
- **No formal security or operational risk management process** is in place or there is no formal integration with broader district-wide enterprise risk management.
- **Regular 3rd party security testing** does not appear to occur, and have most recently been in response to the recent breach.
- Although policies and some supporting procedures may exist for incident response and management, **activities** tend to happen in a vacuum and **without the structures and roles** for an effective response.
- There are **limited current/updated Business Continuity or Disaster Recovery plans** in place to respond to a disruptive event. Very little documentation is in place. Service recovery would be largely dependent on inherent knowledge from current team members.
- The LACCD's information security maturity score was found to be 1.4 out of 5.0 with significant number of opportunities for improvement. This **maturity rating is below the average** of 1.6 for similar security and IT operational reviews while Higher-Ed institutions typically strive to achieve a maturity rating in the 2-3 range.

ISO 21827:2008 <sup>(1)</sup>	Definitions <sup>(1)</sup>
<b>0 - Not Performed</b>	There are no security controls or plans in place. The controls are nonexistent.
<b>1 – Performed Informally</b>	Base practices of the control area are generally performed on an ad hoc basis. There is general agreement within the organization that identified actions should be performed, and they are performed when required. The practices are not formally adopted, tracked, and reported on.
<b>2 – Planned</b>	The base requirements for the control area are planned, implemented, and repeatable.
<b>3 - Well Defined</b>	The primary distinction from Level 2, Planned and Tracked, is that in addition to being repeatable the processes used are more mature: documented, approved, and implemented organization-wide.
<b>4 -Quantitatively Controlled</b>	The primary distinction from Level 3, Well Defined, is that the process is measured and verified (e.g., auditable).
<b>5 - Continuously Improving</b>	The primary distinction from Level 4, Quantitatively Controlled, is that the defined, standard processes are regularly reviewed and updated. Improvements reflect an understanding of, and response to, a vulnerability's impact.

<sup>(1)</sup> Source: ISO/IEC 21827:2008 specifies the Systems Security Engineering - Capability Maturity Model

# IT Operations – Service Delivery Efficiency

*IT Staff expend effort on an inordinately wide range of **duplicate services** across the district resulting in the **inability to invest** in structured and optimized **processes** to efficiently and effectively support the enterprise, including students, faculty, and staff.*

## Observations:

- Considerable **duplication** exists across the district, especially with “public good” services (e.g. Networking, Computing infrastructure, Information Security, and Telecom).
- Staff **spread** too **thin** across activities and fire-fighting to invest in structured processes and continuous improvement.
- Loss of **scale economies** and **inconsistent service quality** due to a lack of domain specialization and distraction from core activities
- **Lack of demarcation** or **clarity** around **roles for ESC IT** (e.g. public good services) **vs. College IT** (college mission focused, i.e. classroom, faculty / student, college specific analytics, websites and applications)

IT Services / Functions (IT and Non-IT)	District Office	City	East	Harbor	Mission	Pierce	South-west	Trade Tech	Valley	West
Department Specific Applications	4.1	0.6	0.7	0.1	0.7	0.1		0.2	0.4	0.2
Web and Collaboration	1.0	0.9	1.3	1.0	1.2	1.0			0.9	0.1
Project Management	0.4	0.2	0.1	0.1	0.1	0.1			0.1	
Data and Decision Support	2.0		0.3	0.1	0.2				0.1	0.1
Software Development	3.0	0.2	0.4	0.2	0.6					
End User Training and Consultation	1.7	0.1	0.7	0.1	0.5		0.1	0.2	0.6	0.2
Instructional Technologies and Learning Support	0.3	0.2	0.3		1.0		0.1		1.1	1.1
Enterprise Collaboration	0.4		0.2		0.1	0.1			0.2	0.1
Enterprise Applications	20.1		0.3	0.2	0.1				0.1	0.2
Learning Spaces and A/V Support		1.2	1.6	0.3	2.2	0.3	0.2	1.0	1.9	0.3
End User Computing	1.9	0.8	3.5	0.7	1.7	2.5	0.6	2.3	4.2	0.9
Service Desk	2.5	1.2	1.2	0.3	0.6	1.2	0.3	0.5	0.7	0.4
Computing Infrastructure	5.5	0.6	0.9	0.5	0.7	0.9	0.4	0.7	0.9	0.5
Information Security	1.9	0.3	0.3	0.5	0.4	0.7	0.3	0.0	0.5	0.3
Telecommunications	0.1	0.2	0.6	0.1	0.3	0.3	0.4	0.3	0.2	0.3
Networking	1.8	0.9	2.2	0.4	0.7	0.6	0.3	0.6	1.2	0.5

Shaded area illustrates conceptual leading practice demarcation between Central and Distributed IT responsibilities

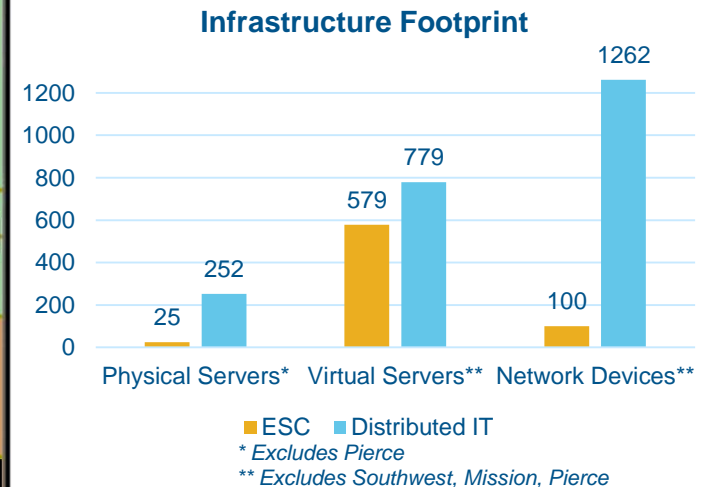
X indicate services provided by Non-IT staff

# IT Operations – Infrastructure Inefficiency

*IT investments<sup>[1]</sup> in **duplicate infrastructure** (e.g. data centers) continue while existing **core infrastructure** (e.g. network) is **neglected** and is close to end of life without planned replacement.*

## Observations:

- **Lifecycle management** for critical IT infrastructure is **inadequate**, and often **not** appropriately **funded**. The presence of at-risk hardware and, in some instances, failed hardware, increases the institution's risk of an outage with an impact on operations, including those currently supporting students, faculty, and staff.
- The **proliferation of Data Centers and servers** and **redundant investments** across the District:
  - **Complicates** the ability to implement a unified and complete **Disaster Recovery strategy** for the District,
  - Drastically **increases** the **cost** of implementing a technical solution capable of protecting the entire IT footprint.
  - Significantly **complicates** the technical footprint and considerations for **migration to cloud services** in the future
- **Lack of a district wide IT strategy** prompts colleges to **reactively fund IT** and exacerbates infrastructure **complexity** and **risk**.



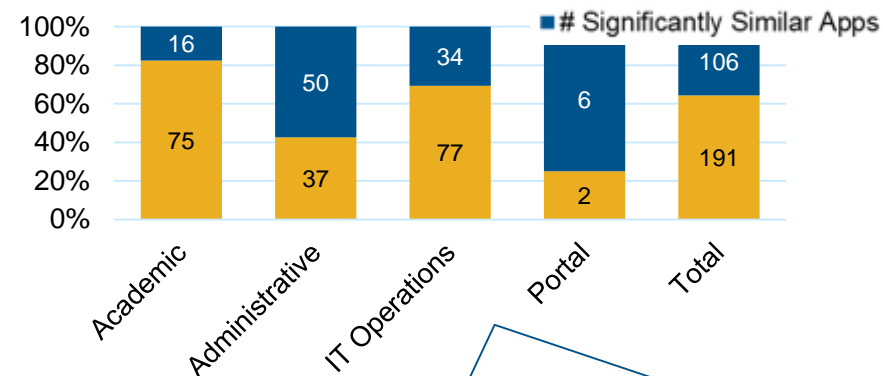
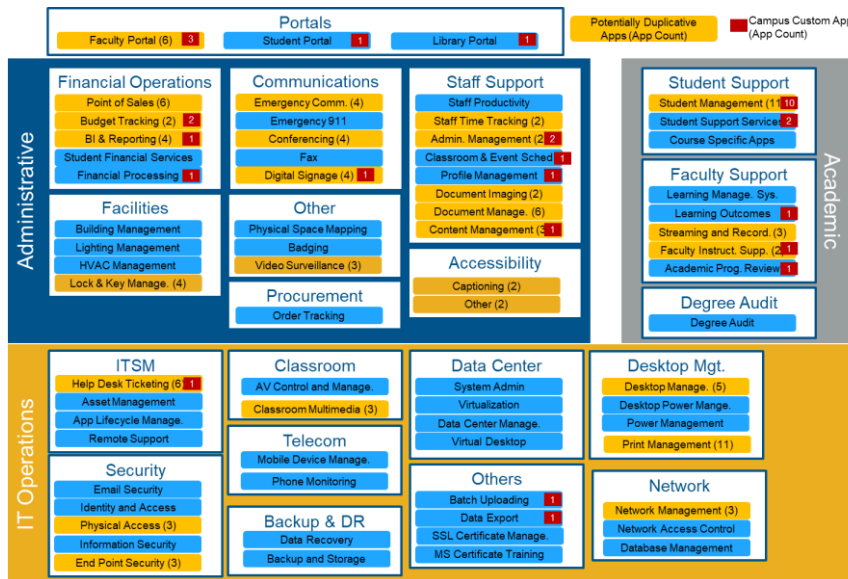
[1] driven by bond funding

# IT Operations – Applications Complexity

LACCD has seen numerous applications spawn across the district; many are **functionally similar**, rely on **custom** homegrown solutions and **substantially increase interoperability complexity and maintenance effort**.

## Observations:

- Significant **application** and **interface proliferation** and duplication complicates strategy for application & development, maintenance, and interoperability.
- **Custom solutions** to meet user demand result in **unsustainable** support and **maintenance requirements**.
- **Complex application landscape** limits the District's ability to develop a **standardized** approach for Business Intelligence & Analytics.
- The presence of **two ERP systems** (SAP and SIS) results in additional challenges:
  - Reliance on **two vastly different skill sets**, both, in terms of applications and infrastructure.
  - Inability to exploit synergies in **foundational infrastructure & architectures** – databases, servers, interfaces, etc.
  - Adds significant **complexity** in LACCD's ability to consider **cloud solutions** for the future



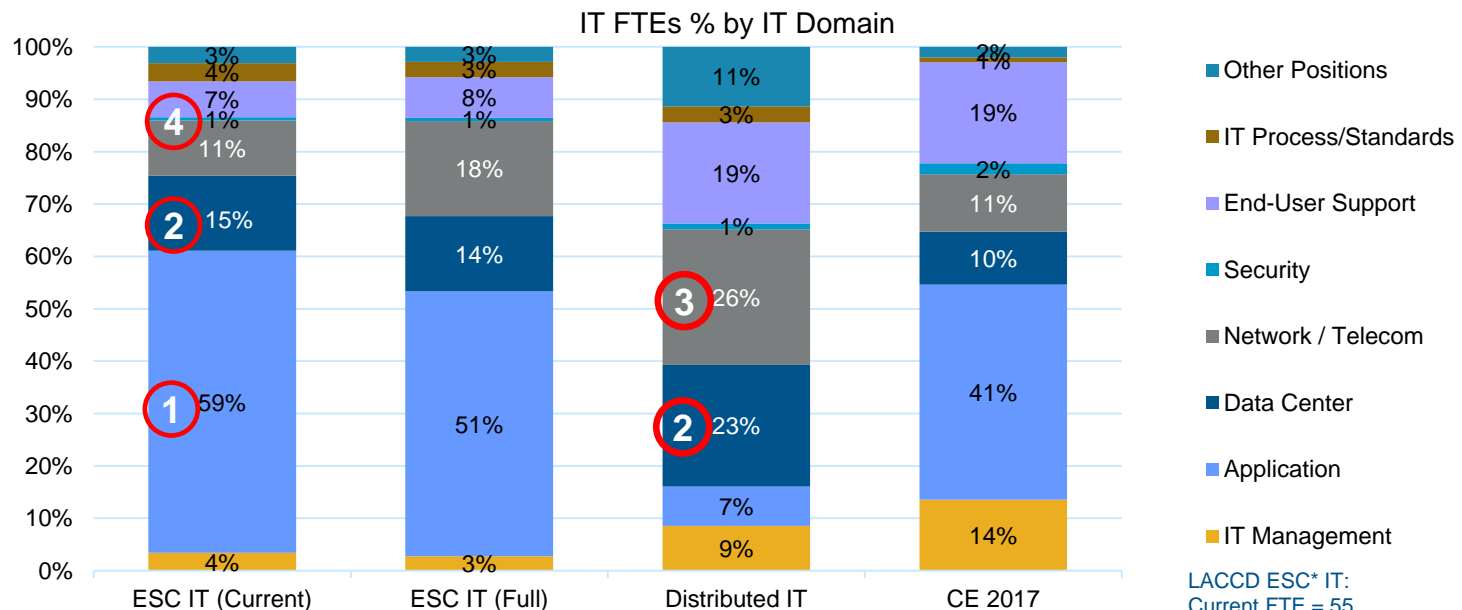
36% of 297 total applications are significantly similar functionally

# IT Organization – Staffing Effectiveness

There is significant **duplication** in supporting “Public Good” Services such as Data Center, Network, and IT Security.

## Observations:

- ① A significant percent (59%) of ESC\* IT personnel support **applications** – attributable to **two ERP (SAP / SIS)** with little ability to cross-leverage skills & resources.
- ② Significant effort is expended **on Data Center services**, especially considering the **duplicate effort and investment** between ESC\* IT and the college (23%).
- ③ Significant effort is expended on supporting the **Network locally** at the colleges (26%).
- ④ Lack of resources dedicated to **IT Security** significantly increases LACCD’s cyber security risk profile.



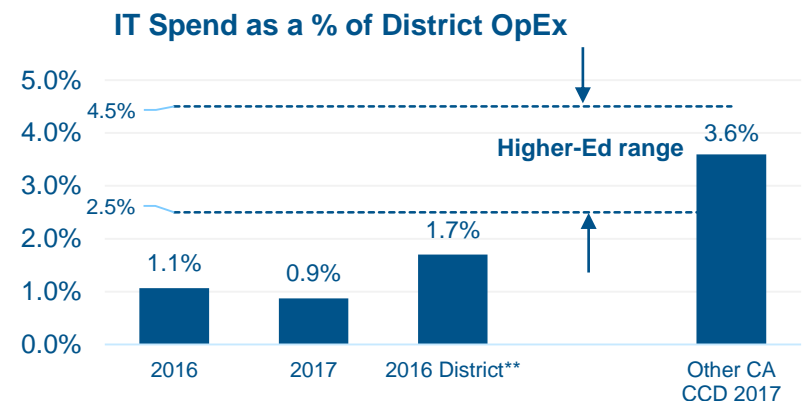
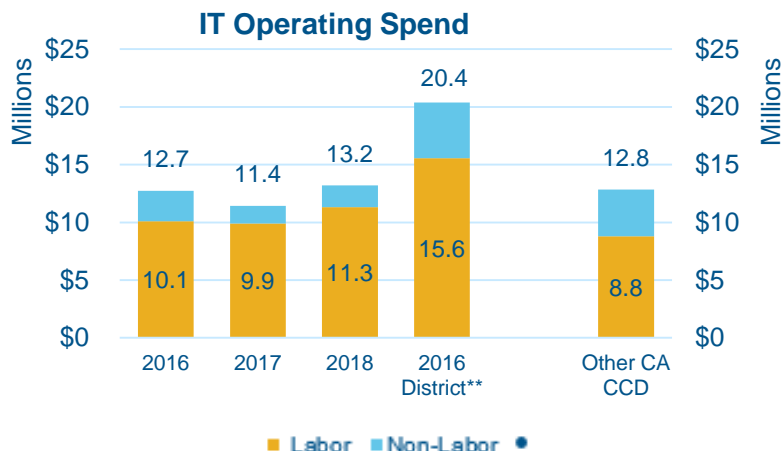
LACCD ESC\* IT:  
 Current FTE = 55  
 Total (full) FTE – 79  
 \* Educational Services Center

# IT Strategy and Funding

*LACCD's lack of a cohesive district-wide strategy and lack of a consistent model for Funding IT has resulted in a fragmented IT infrastructure and application landscape; **chronic underfunding** has resulted in significantly stretched resources who are in constant fire fighting mode.*

## Observations:

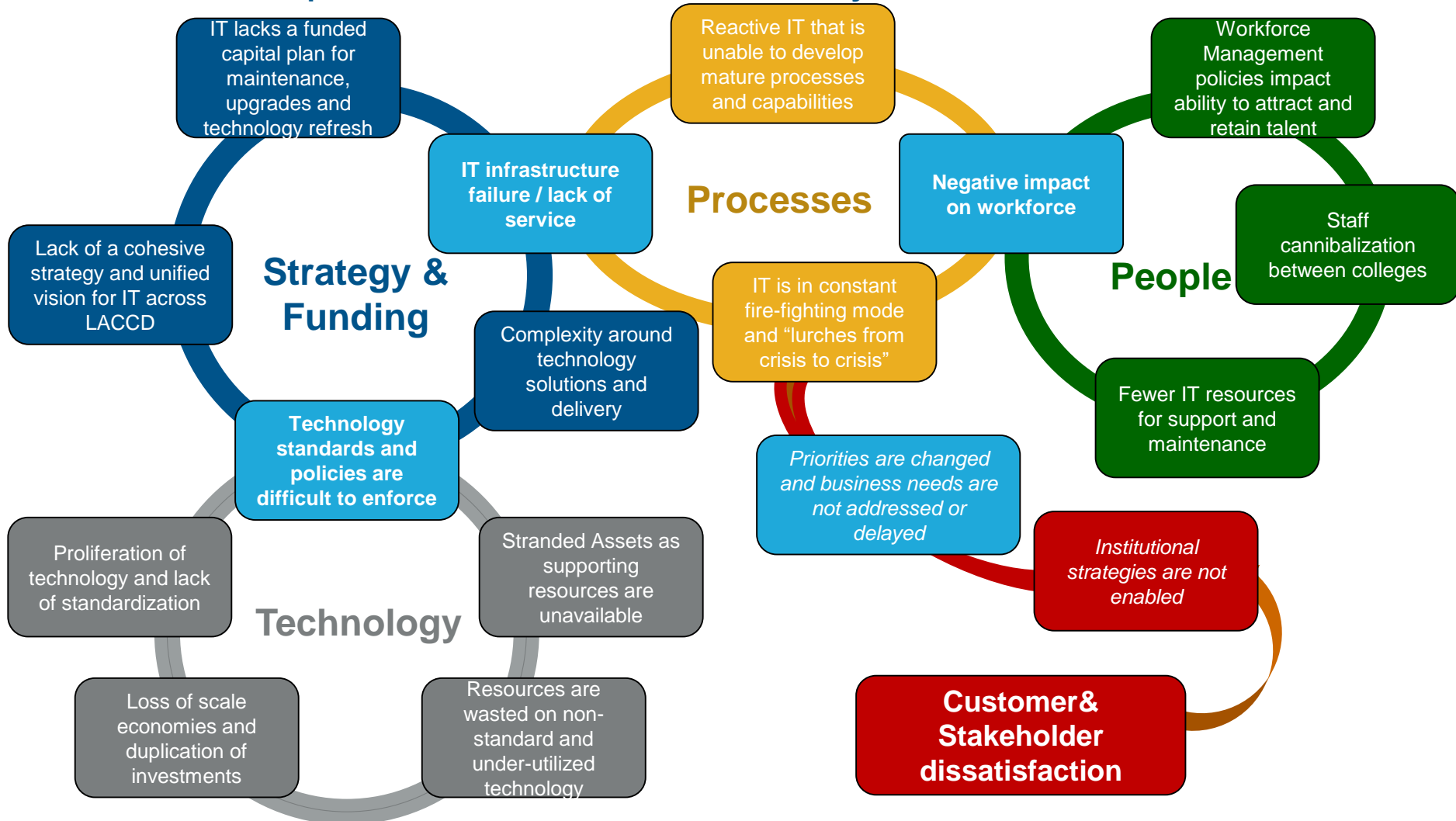
- LACCD has defined a **technology masterplan** for the district, however it **does not clearly articulate** how it enables the **strategic goals** of the district. **Coordination** of the college's Technology Master Plan's with ESC\* IT is **unstructured** and **ad hoc**.
- LACCD's **IT spend** for the district is **significantly lower** than other smaller districts and the consistently lower proportion of non-labor spend indicates chronic **underspending on IT equipment and infrastructure**.
- LACCD lacks a funded capital replacement plan and the dependence on **bond funding** for IT infrastructure **incentivizes tactical** investments in **localized** solutions **without consideration for long term strategy**.
- **Operating costs are not accounted for** and allocated operating funds often diverted to other pressing campus priorities.



• \* Educational Services Center  
 • \*\*Includes Colleges

# Putting it all together

A number of **complex** and interrelated **structural** factors contribute to the challenges that LACCD faces and will require a **transformative** effort to effectively enable the district's vision for 2020.



**LACCD's decentralized model has a profound impact in terms of the incentives to maintain a cohesive and collaborative IT strategy**



4




# RECOMMENDATIONS OVERVIEW


# Transformation Journey – Initiatives

LACCD needs to engage in an IT Transformation Journey in order to enable its District-wide IT resources and investments to effectively support the District’s Strategic Plan. This Journey can be achieved through establishing and executing 6 key initiatives.

	Initiatives	Objectives	Expected Outcomes
	<b>Stabilize Foundation</b>	<b>Stabilize</b> key IT services, <b>fill key vacancies</b> and <b>determine</b> district wide IT <b>funding</b>	<ul style="list-style-type: none"> <li>IT team sized to meet immediate core needs</li> <li>Rebuild relationship with stakeholders</li> <li>Establish TCO based baseline IT funding</li> </ul>
Strategy	<b>Establish Strategic Alignment</b>	Define <b>IT strategy and governance</b> to ensure IT investments reflect business priorities and deliver expected business value	<ul style="list-style-type: none"> <li>IT Investments aligned with strategic priorities, increased accountability and value realized</li> <li>Improved IT/Stakeholder relationship</li> </ul>
	<b>Improve Operational Capability</b>	Optimize the district wide <b>service model</b> , establish service management, systems delivery capabilities, <b>simplify</b> the <b>infrastructure</b> footprint and establish the foundation for <b>cloud migration</b>	<ul style="list-style-type: none"> <li>Simplified and standardized IT Service, infrastructure and application landscape</li> <li>Flexible and responsive IT solution delivery capability and quality</li> </ul>
Operations	<b>Secure the District</b>	Create an <b>information security organization</b> , and develop security and <b>Disaster Recovery (DR) capabilities</b> to protect the district and secure it from disasters	<ul style="list-style-type: none"> <li>Improve the security posture of the district and protect against cyber security threats</li> <li>Minimal downtime of critical systems in the case of a major event</li> </ul>
	<b>Build / Strengthen the Organization</b>	Develop IT teams, <b>skills and competencies</b> , improve <b>professional development</b> opportunities for the IT workforce	<ul style="list-style-type: none"> <li>Improved ability to attract and retain talent</li> <li>A satisfied and effective workforce with the capabilities to partner with stakeholders and deliver LACCD strategy and objectives</li> </ul>
Management	<b>Enhance Management of IT</b>	Develop capabilities and plans to <b>effectively manage IT assets</b> and drive lower total cost of ownership	<ul style="list-style-type: none"> <li>Better insight and decision making ability</li> <li>Reduce asset redundancy, improved asset utilization, reduced TCO*</li> </ul>

# Transformation Journey – Roadmap

Initiatives	Projects	Months								
		1	2	3	4	5	6	7	8	9
	Technical Change Management	█								
	College IT Support	█	█							
	Fill IT Vacancies	█	█	█						
	IT Procurement Centralization		█	█	█					
	Establish Security Task Force				█	█	█	█		
	Business Relationship Manager				█	█	█	█	█	
	Zero-based TCO* multi year IT Budget					█	█	█	█	█
	District Capital Plan								█	█

Strategy	Workstream	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
			District-wide IT Funding	█	█	█	█	█	█	█	█		
District-wide IT Strategic Plan	█												
IT Governance			█	█	█	█							
	IT Service Management												
	IT Service Rationalization				█	█	█	█	█	█	█	█	█
	IT Support Center Model				█	█	█	█	█	█	█	█	█
	Data Center and Compute Optimization				█	█	█	█	█	█	█	█	█
	Application Modernization				█	█	█	█	█	█	█	█	█
	SDLC** / Project Management												
	Information Security Strategy & Operations		█	█	█	█	█	█	█	█	█	█	█
	Business Continuity / Disaster Recovery												
	Organization Development		█	█	█	█	█	█	█	█	█	█	█
	Information Security Management Organization		█	█	█	█	█	█	█	█	█	█	█
	IT Communications Plan					█	█	█	█	█	█	█	█
	IT Procurement					█	█	█	█	█	█	█	█
	IT Cost Management												

\*Total Cost of Ownership

\*\* System Development Life Cycle

# Immediate Next Steps

- Establish a **Transformation Management Office (TMO)** to drive the transformation and provide a mechanism for enabling effective governance, change management, program management, and strategic leadership.
- Establish and hire a competent **leader to head** the Transformation Management Office and **partner** with LACCD leadership to **execute the transformation** over the coming 24-36 months.
- **Execute Stabilization** activities, including **immediate critical hires**.
- **Initiate Strategic Alignment** workstreams and projects:
  - IT Funding
  - IT Strategic Planning
  - IT Governance Model



# APPENDIX



# SECURITY DETAILS

# Information Security Findings

The majority of ESCs **IT security management practices** would be described as generally being **performed informally and immature**. This **should not be interpreted as major or imminent security risks exist** across the enterprise and will lead to a breach. However, what should be noted by LACCD is, without a strong security management function and dedicated security management professionals, **the institution does not know if major or imminent security risk exists**.

- As reviewed by Huron, the 2017 **Crypsis assessments (i.e. Pierce College, LACCD) were predominantly security technology focused** in nature and scope. Subsequent LACCD remediation efforts including disaster recovery, firewalls, and changes to other technologies **certainly improved the organizations security posture**, yet these are **only elements of a broader security management program** for ensuring the confidentiality, availability and integrity of LACCD assets.
- **Huron's review was much broader in nature** and is structured based on global best practices for information security management. We utilize ISO/IEC 27000 standards to review how ESC is managing numerous areas of security including **risk management, compliance, human resources, cryptography, strategy, governance, policy, incident management, communications security and more**.

Some of the primary areas impeding ESC IT in achieving a higher maturity rating are due to inconsistencies or non-existent security practices or techniques required as part of a broader security management program including the following:

- It was **unclear** as described by ESC IT staff if **all remediation efforts** related to the Crypsis report had been **verified as complete**.
- Key documentation related to the design, build and configuration of information systems within LACCD are non-existent to minimal.
- Key IT operational processes are not formally defined or documented, although they are generally known to those responsible.
- No form of IT risk analysis and management are in place.
- Historical inconsistency with engagement of 3<sup>rd</sup> party security assessors to define technical vulnerabilities and threats.
- No formally defined metrics or methods of measuring and reporting security events across the enterprise.

**Benchmarking against recognized and accepted best practices is not forgiving to the immature participant**

# IT Capability Maturity – IT Operations

<b>IT Security</b>	
<b>Information Security Risk Management</b>	0.3 out of 5.0
<b>Information Security Policies</b>	1.3 out of 5.0
<b>Organization of Information Security</b>	1.0 out of 5
<b>Human Resource Security</b>	1.6 out of 5
<b>Asset Management</b>	1.0 out of 5
<b>Access Control</b>	1.4 out of 5
<b>Cryptography</b>	1.0 out of 5
<b>Physical and Environmental Security</b>	1.7 out of 5
<b>Operations Security</b>	1.1 out of 5
<b>Communications Security</b>	1.5 out of 5
<b>Systems Acquisition, Development and Maintenance</b>	.9 out of 5
<b>Supplier Relationships</b>	1.2 out of 5
<b>Information Security Incident Management</b>	1.0 out of 5
<b>Compliance</b>	1.3 out of 5



# IT Capability Maturity – Disaster Recovery

<b>Disaster Recovery and Business Continuity Management</b>	
<b>Governance Model (i.e., Policies and Standards)</b>	1.0 out of 5
<b>DR/BC Coordination</b>	0.0 out of 5
<b>Business Impact Assessment Processes and Procedures</b>	0.0 out of 5
<b>Recovery Team Structure</b>	1.0 out of 5
<b>DR/BC Planning</b>	0.0 out of 5
<b>DR Technical Solution</b>	1.0 out of 5
<b>Testing and Exercising</b>	0.0 out of 5
<b>Plan and Program Maintenance</b>	0.0 out of 5
<b>Training and Awareness</b>	0.0 out of 5
<b>Process Integration</b>	1.0 out of 5

2



# **SPEND AND STAFFING ASSESSMENT DETAILS**

# IT Spend Assessment Key Takeaway

The district office and each of the colleges was compared to similarly sized districts and community colleges to develop a comparative view of IT resources at LACCD.

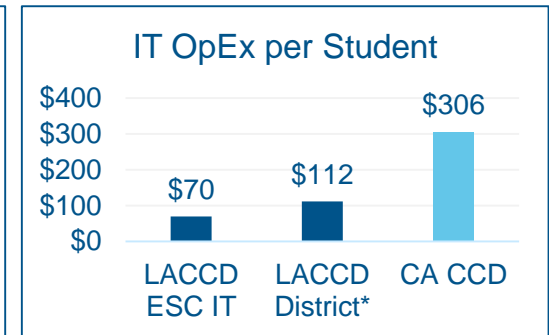
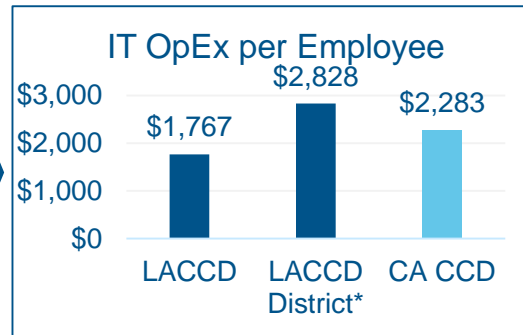
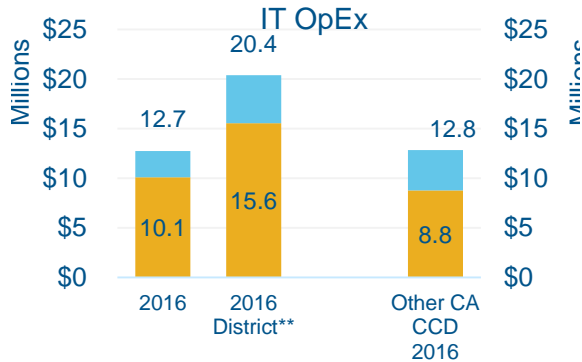
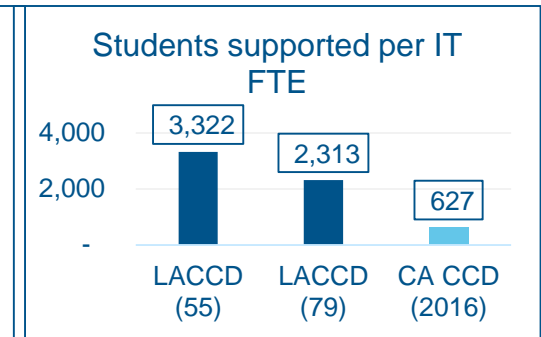
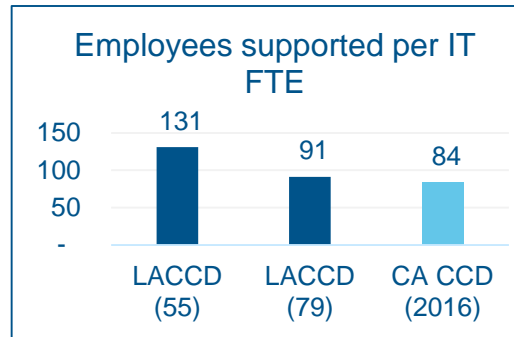
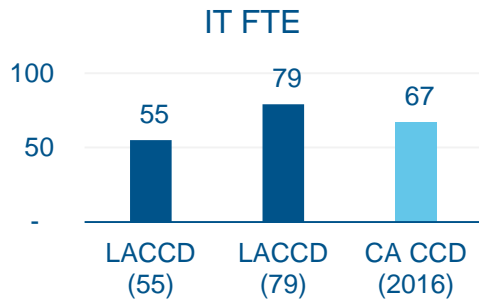
District	Indication
Total IT spend	↓
Total IT spend as a % of Institution OpEx	↓↓
% Total non-Labor IT spend	↓↓
Total IT spend per employee	↓
Employees supported per IT employee	↑↑

Colleges	
Total IT Spend	↓
Total IT spend per student	↓
Total IT staff	↓
Students served per IT staff	↑↑

LACCD IT at both, the colleges and the district, is significantly underfunded compared to similar community colleges and smaller districts.

# IT Spend Assessment Observations (cont.)

LACCD's Central District (ESC) IT Operating spend to support district employees is also significantly lower than other smaller community college districts.



## Key Observations:

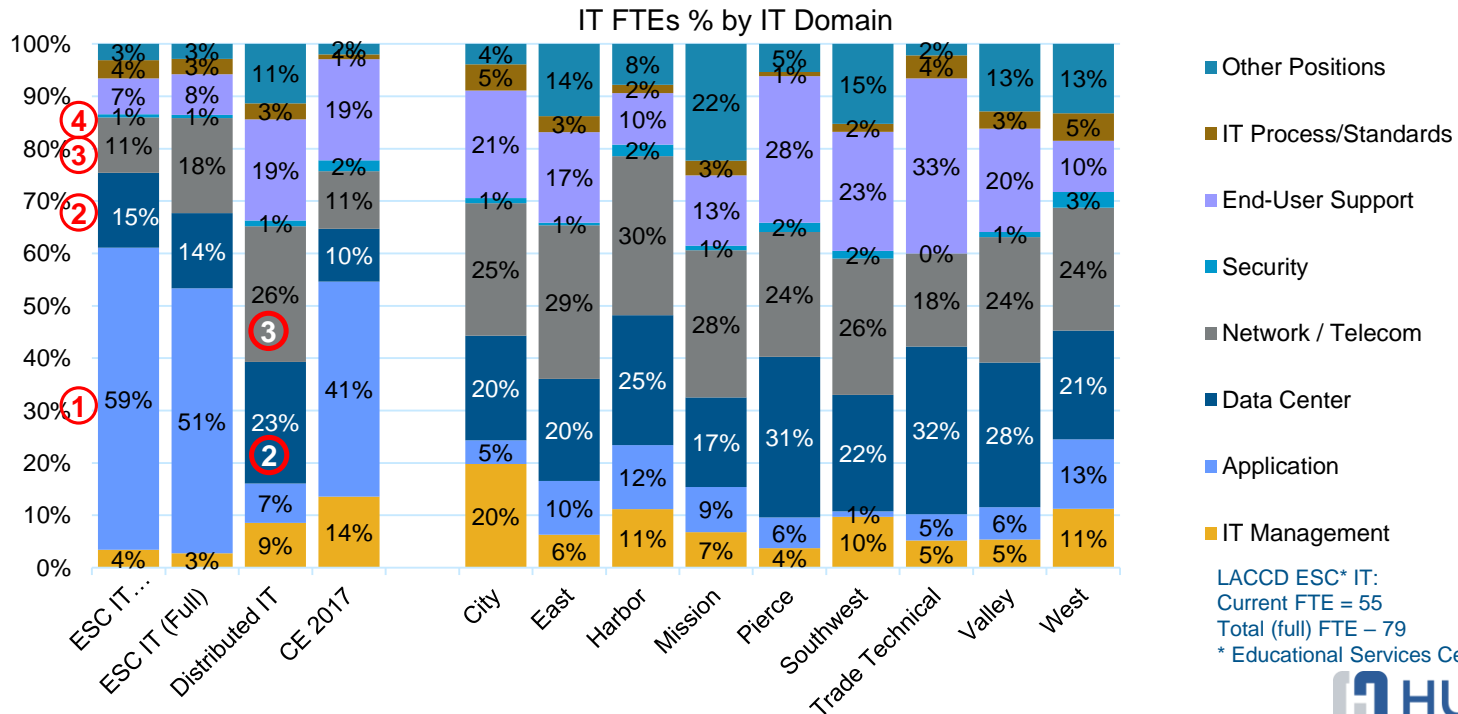
- LACCD supports more employees per IT staff and at the same time spends far fewer IT dollars per Employee or student.

# IT Organization – Staffing Effectiveness

There is significant **duplication** in supporting “Public Good” Services such as Data Center, Network, and IT Security.

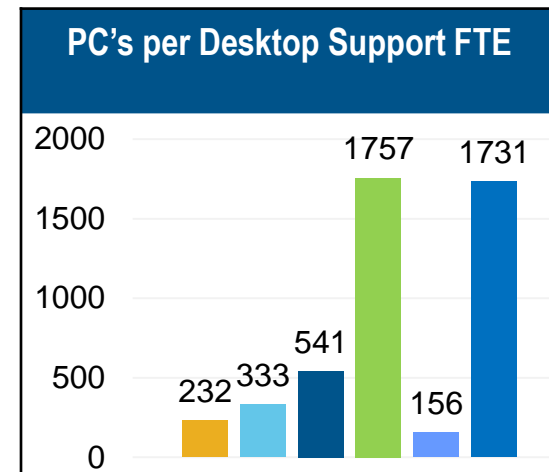
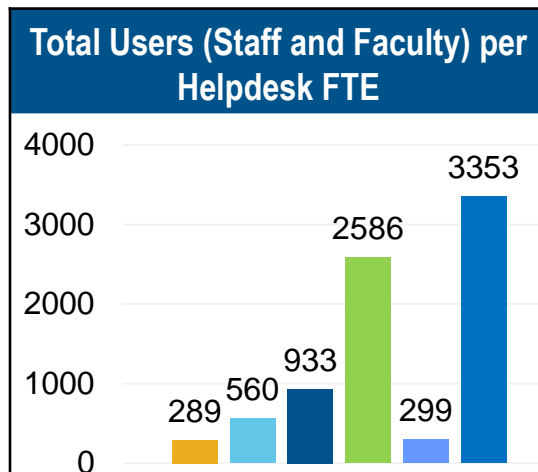
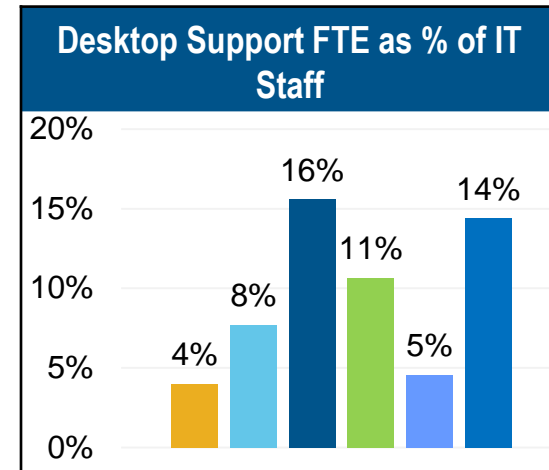
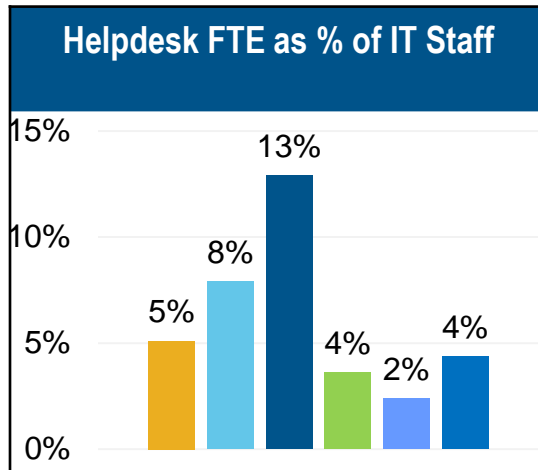
## Observations:

- ① A significant percent (59%) of ESC\* IT personnel support **applications** – attributable to **two ERP (SAP / SIS)** with little ability to cross-leverage skills & resources.
- ② Significant effort is expended **on Data Center services**, especially considering the **duplicate effort and investment** between ESC\* IT and the college (23%).
- ③ Significant effort is expended on supporting the **Network locally** at the colleges (26%).
- ④ Lack of resources dedicated to **IT Security** significantly increases LACCD’s cyber security risk profile.



# End User Support Efficiency Ratios (IT and Non-IT)

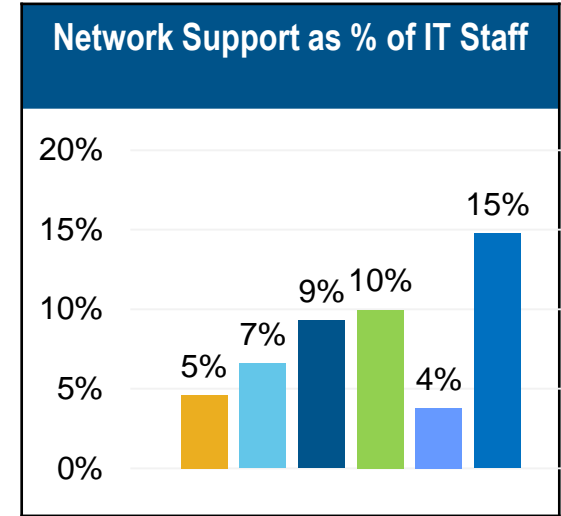
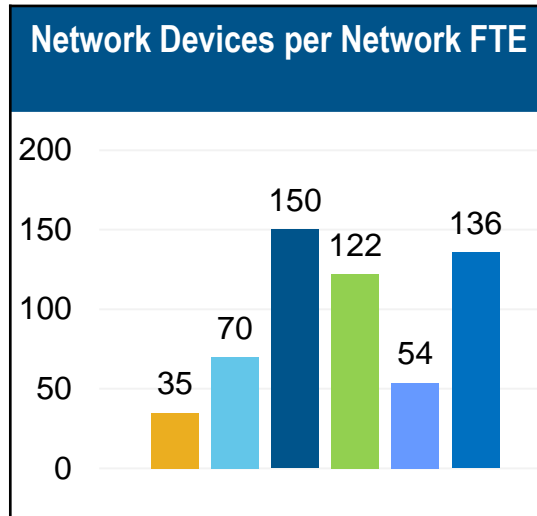
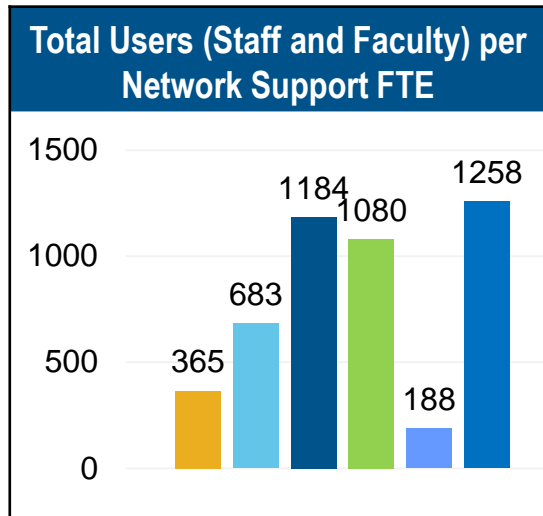
Even including Non-IT (e.g. instructional assistants, etc.) support, LACCD's end user support metrics seem to suggest that help desk support staff are significantly over-extended across the institution.



■ 25th %ile ■ Median ■ 75th %ile ■ LACCD Total ■ District Office ■ Distributed

# Network Support Efficiency Ratios

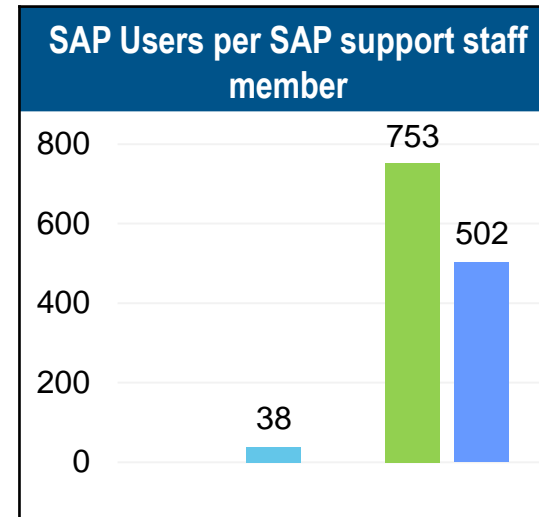
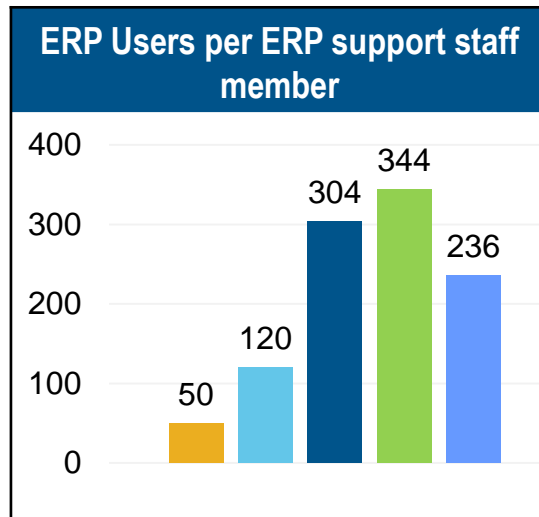
LACCD's Network support staff is comparable to medium sized institutions, but skews to the high side.



■ 25th %ile ■ Median ■ 75th %ile ■ LACCD Total ■ District Office ■ Distributed

# ERP Support Efficiency Ratios

LACCD's ERP environment's support staff is significantly overextended when compared to industry norms. SAP is known to require larger support, and LACCD falls well outside of industry benchmarks.



■ 25th %ile ■ Median ■ 75th %ile ■ District Office (Current Staffing) ■ District Office (Fully Staffed)



3



# APPLICATIONS DETAILS

# IT Operations - Application Solution Delivery

## Application Inventory

Business areas with the largest number of similar applications suggest opportunities to leverage standard solutions across the district

### Student Management

- Career Center Student Tracking
- Census Roster
- CI Track
- Club Registration System
- CS Track
- Entrepreneurship Registration System
- Grade Petition
- International Students
- Lab Track
- Net Track
- Writing Center Workshop Registration

### Print Management

- ACE
- Equitrac
- GoPrint
- LPTOne
- MS Print Manager
- Monitor
- OCS
- Quality Copying
- RSA Qdirect
- SmartCopy System
- UniFlow

### Point of Sales

- Denver Software
- FlashPoint
- Prism
- Shift4
- UTG
- WinPRISM

11 separate applications with fundamentally similar purposes are currently being utilized to track student activity across the institution,

11 print applications are being leveraged across the institution that fulfill similar needs, suggesting opportunities to standardize offerings

6 different Point of Sales applications are being leveraged by the district rather than offering a standardized solution

